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Davis, Julie M. (2007) Climate change and its impact on young children. In *Every Child*, 13(4) pages pp. 6-7, Early Childhood Australia.

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Climate change and its impact on young children

*This excerpt, adapted from a paper written by education for sustainability expert **Dr Julie Davis**, provides a valuable explanation of climate change and what we, as early childhood educators and carers, can do about it.*

In a very short space of time, global warming and climate change has 'hit the radar' at all levels: individually, locally, nationally and internationally. In Australia, attention to climate change and its environmental, economic and social impacts has been spurred on by deepening concerns about diminishing water supplies, rising fuel costs and uncertainty about future energy supplies.

What is global warming?

In a nutshell, global warming is the Earth being made warmer than it should be, by the increasing presence of gases that trap heat in the atmosphere. The process is similar to that of a greenhouse, where the inside air is warmed by the sun's rays and cannot readily escape.

While the trapping of heat is a natural phenomenon that enables humans to live on Earth, scientists believe the planet's climate system has become unbalanced as a result of human actions such as burning fossil fuels for energy, and the clearing and degradation of forests.

As global warming causes the oceans to heat, other adverse environmental impacts occur:

- increases in extreme weather events
- prolonged droughts and heat waves
- melting of ice caps
- retreat of glaciers
- higher sea levels
- acidification of the oceans
- changes to marine life cycles (Lowe, 2007).

The overall result of global warming is a much-diminished Earth, with significantly reduced capacity to support the 9.4 billion people who are anticipated to inhabit it by 2050 (US Census Bureau, 2006)—including our own children and grandchildren.

A recent study by Lawrence Lam (2007) also points to specific health risks associated with global warming. Lam, a paediatrics specialist from the University of Sydney, found it is likely that global warming will lead to increasing numbers of preschoolers being treated for fever and gastroenteritis at hospital emergency departments, because young children have less capacity to regulate their bodies during heat waves.

What is sustainability?

Global warming is obviously a major challenge for us all. However it is a symptom of a much bigger issue: we humans are living unsustainably on Planet Earth—we would need at least three more planets if everyone lived like the average Australian (WWF, 2006, p. 19).

Sustainability, though, is about much more than ecological issues; the effects of our unsustainable lifestyles take many different forms. Leading international epidemiologist Tony McMichael suggests that we are already seeing some of the negative effects of modern ways of living, with increased health impairments arising from chronic health problems (2003). Such problems include rises in obesity and diabetes, heart disease and cancer, and the growing impact of depression and other mental health issues.

Sustainability is also about social justice and intergenerational equity. The causes and effects of unsustainable living are disproportional and unevenly distributed. While some humans enjoy the benefits of global economic development, industrialisation and new technologies, others are bearing the risks and costs—with the poorest nations, and the poorest people within nations, most at risk (Lowe, 2006).

A role for early childhood education

Unless we change our ways—and soon—our children and future generations will inherit a sadly depleted earth, and their own contributions will exacerbate the problems. Children are, after all, already growing up as ‘little consumers’, many already suffering from what has been termed ‘nature deficit disorder’ (Louv, 2005)—the cumulative effect of a lack of experience in, appreciation of and care for the natural world.

The early childhood education field, until recently, has been very slow to take up the sustainability challenge. Nevertheless, there are some excellent examples of early childhood centres and services that do model sustainability as part of their curriculum, thereby supporting children to be social and environmental activists. It is important to congratulate and showcase such organisations, in order for us all to learn and benefit from their example.

What can the early childhood education field do?

While being informed about global warming and its impact on young children is important, it is not enough. We must focus on how even very young children—with the support of caring and concerned adults—can be agents for change. As educators, we all need to develop dispositions that encourage care and consideration of the Earth, of each other and for the future.

- Ensure children get to play in quality, natural environments (or, at least, in ‘naturalised’ outdoor settings) where they can have deep engagement with the natural world.
- Involve children—as participants with legitimate ideas, perspectives and creative responses—in authentic learning and action around meaningful environmental and social issues.
- Model ‘green housekeeping’ practices in our early childhood care and education centres and services, such as minimising waste, and reducing water and energy consumption.
- Build sustainability into policies and practices so others know where we stand, and use this to communicate with and educate the wider community.
- Find out more about climate change and sustainability issues—seek current, reliable information about the state of the planet.
- Join early childhood environmental education networks and become campaigners and co-learners with colleagues.
- Use collective power to challenge employers, professional associations, accreditation services and teacher education institutions to include education for sustainability as part of preservice education and professional development.
- Advocate for ‘child-friendly’ communities, towns and cities where urban design, transport systems and architecture enable children and families to have safe, open environments that promote play, health and wellbeing.

And, finally, ask yourself what you can do in your early childhood setting. Think and act now!

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Julie Davis’ complete ‘Climate change and its impact on young children’ paper is available on the Early Childhood Australia website, along with links and useful resources, at **www.earlychildhoodaustralia.org.au/sustainability**

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